

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

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GLOBALFOUNDRIES U.S. INC. )  
Plaintiff, ) C.A. No. \_\_\_\_\_  
v. )  
MOTOROLA MOBILITY LLC )  
Defendant. )  
\_\_\_\_\_  
)

**JURY TRIAL DEMANDED**

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**COMPLAINT**

Plaintiff Globalfoundries U.S. Inc. (“Globalfoundries” or “Plaintiff”) brings this patent infringement action against Defendant Motorola Mobility LLC (“Motorola” or “Defendant”) as follows:

**NATURE OF THE ACTION**

1. This is a civil action for infringement of United States Patent No. 9,355,910 (“910 patent” or the “Asserted Patent”) under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*

**THE PARTIES**

2. Plaintiff Globalfoundries U.S. Inc. is a Delaware corporation with its principal place of business at 2600 Great America Way, Santa Clara, California 95054.

3. Defendant Motorola Mobility LLC is a Delaware corporation with its principal place of business at 222 W. Merchandise Mart Plaza, Suite 1800, Chicago, Illinois 60654.

## **JURISDICTION AND VENUE**

4. The Court has subject matter jurisdiction over these claims under 28 U.S.C. §§ 1331 and 1338(a) and the patent laws of the United States, 35 U.S.C. § 1 *et seq.*

5. The Court has personal jurisdiction over Motorola Mobility LLC consistent with the requirements of the Due Process Clause of the United States Constitution and the Delaware Long Arm Statute. Motorola Mobility LLC is incorporated in Delaware. On information and belief, Motorola has regularly and systematically transacted business in Delaware, directly or through subsidiaries or intermediaries, and/or committed acts of patent infringement in Delaware as alleged more particularly below. Motorola has also placed integrated circuits using Taiwan Semiconductor Manufacturing Company Ltd. (“TSMC”) 28 nanometer and smaller technology<sup>1</sup> and products containing these integrated circuits, such as the Motorola 5G Moto Mod that incorporates Qualcomm’s Snapdragon 855 manufactured using TSMC’s 28 nanometer and smaller technology (the “Accused Products”) into the stream of commerce by shipping Accused Products into Delaware, shipping Accused Products knowing that those products would be shipped into Delaware, and/or shipping Accused Products knowing that these Accused Products

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<sup>1</sup> TSMC 28 nanometer and smaller technology includes TSMC’s 28 nanometer technology (including TSMC’s High-k Metal Gate gate-last technology and high-performance compact technology) (“28 Nanometer”), TSMC’s 22 nanometer technology (including TSMC’s 22 nanometer ultra-low power, 22 nanometer ultra-low leakage, and 22 nanometer ultra-low leakage static random access memory technologies) (“22 Nanometer”), TSMC’s 20 nanometer technology (“20 Nanometer”), TSMC’s 16/12 nanometer technology (including TSMC’s 16 nanometer Fin Field Effect Transistor (“FinFET”) process, 16 nanometer FinFET Plus process, 16 nanometer FinFET Compact Technology, and 12 nanometer FinFET Compact Technology) (“16 Nanometer”), TSMC’s 10 nanometer technology (including TSMC’s 10 nanometer FinFET process) (“10 Nanometer”), TSMC’s 7 nanometer technology (including TSMC’s 7 nanometer FinFET process) (“7 Nanometer”). Globalfoundries reserves the right to accuse any forthcoming TSMC technology, such as TSMC’s 7 nanometer extreme ultraviolet lithography technology and TSMC’s 5 nanometer technology.

would be incorporated into other Accused Products that would be shipped into Delaware. The Court therefore has both general and specific personal jurisdiction over Motorola.

6. Venue is proper in this district under 28 U.S.C. § 1400(b) because Motorola resides in this district.

### **FACTUAL BACKGROUND**

7. Globalfoundries is a U.S. company with manufacturing facilities that use and develop some of the world's most advanced semiconductor devices available today. Building on IBM's world-class semiconductor technology heritage, Globalfoundries, the acquirer of IBM's semiconductor division, has been accredited as a Category 1A Microelectronics Trusted Source for fabrication, design, and testing of microelectronics by the U.S. Department of Defense (DOD).<sup>2</sup> Globalfoundries' East Fishkill, New York facility is currently the most advanced Trusted Foundry, and as such is the only facility of its kind that can provide certain advanced circuits to satisfy the DOD's requirements. As the second-largest foundry in the world and the only advanced Trusted Foundry, Globalfoundries is uniquely equipped to efficiently and quickly meet the DOD's advanced and highly classified manufacturing and production needs—and is also equipped to do the same for its private-sector clients.

8. Globalfoundries is the most advanced pure-play foundry in the U.S. and Europe, and employs thousands of people in the U.S. and worldwide. While other companies were abandoning semiconductor manufacturing in the U.S., Globalfoundries bucked this trend by investing billions of dollars on advanced technology and research in the United States. Globalfoundries originated from another leading U.S. semiconductor company, Advanced Micro Devices' semiconductor manufacturing arm in 2009 and expanded globally through acquisition

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<sup>2</sup> "Aerospace and Defense," <https://www.globalfoundries.com/market-solutions/aerospace-and-defense>.

and organic investment. Its largest expenditure by far is its \$15 billion organic U.S. investment in its leading-edge, 300 acre facility known as Fab 8 in Malta, New York. Globalfoundries broke ground for that state of the art facility in 2009 and produces leading edge technology from that location to customers worldwide. A major U.S. acquisition took place in 2015 when Globalfoundries acquired IBM's microelectronics facilities and personnel in Burlington, Vermont and East Fishkill, New York—facilities that became Fab 9 and Fab 10, respectively. Globalfoundries acquired not just IBM's facilities and personnel, but also the fruits of IBM's decades of industry-leading investment in U.S. semiconductor fabrication capacity and technology. Specifically, Globalfoundries obtained 16,000 IBM patents and applications; numerous world-class technologists; decades of experience and expertise in semiconductor development, device expertise, design, and manufacturing; and an expanded manufacturing footprint. The acquisition cemented Globalfoundries' role as a global leader in world-class semiconductor manufacturing and advanced process technologies.<sup>3</sup>

9. Globalfoundries' U.S. manufacturing facilities in Burlington, Vermont; East Fishkill, New York; and Malta, New York use and develop some of the most advanced process nodes and differentiated technologies (inclusive of its 12/14nm FinFET, RF and Silicon Photonics technology solutions) available today. Fab 8 is a leading fabrication facility for advanced manufacturing in the U.S., with 40,875 square meters of cleanroom space and continued expansion, and over 3,000 total employees as of June 2019. The current capital investment for the Fab 8 campus stands at more than \$15 billion, making Fab 8 the largest public-private sector industrial investment in New York State's history. The significance of this

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<sup>3</sup> "Globalfoundries Completes Acquisition of IBM Microelectronics Business," <https://www.globalfoundries.com/news-events/press-releases/globalfoundries-completes-acquisition-of-ibm-microelectronics-business>.

investment and its importance to advanced manufacturing in the U.S. have been recognized by top government officials, including by the President of the U.S. during a 2012 visit to New York hosted in part by Globalfoundries.<sup>4</sup>

10. Globalfoundries' investment from the Champlain Valley through the Hudson Valley makes it the spine of the Northeast's Tech Valley. Three out of Globalfoundries' five fabs are in the U.S., but investment does not stop at its manufacturing capacity. Globalfoundries' manufacturing footprint is supported by facilities for research, development, sales, and design enablement located near hubs of semiconductor activity, including in Santa Clara, California; Dallas, Texas; Austin, Texas; Rochester, Minnesota; Endicott, New York; and Raleigh, North Carolina. Of its 16,000 employees worldwide, approximately 7,200 are employed in the U.S.

11. However, the manufacturer of the Qualcomm products used in the Motorola products accused of infringing in this action, TSMC, has taken a different approach and has decided to simply use Globalfoundries' patented inventions without payment or permission. TSMC is a competing semiconductor foundry with manufacturing facilities located primarily in Hsinchu, Taiwan. TSMC has recently expressed an interest in building a new manufacturing facility in the U.S., but has not reported any tangible steps toward implementing its ostensible interest. In contrast, TSMC completed building the most advanced manufacturing facility of its kind in mainland China last year. By bringing advanced 16nm FinFet to China, TSMC has positioned itself to benefit further from the shift in global supply chains out of the U.S. and Europe into Greater China. TSMC develops, manufactures, imports, and sells for importation

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<sup>4</sup> "Globalfoundries Welcomes President Barack Obama to NY's Capital Region," <https://blog.globalfoundries.com/globalfoundries-welcomes-president-barack-obama-to-nys-capital-region/>.

into the U.S. semiconductor devices, including to the Defendant. But TSMC does these things on the back of Globalfoundries, using Globalfoundries' patented technologies to make its products. Indeed, although its infringing chips have flooded the U.S. market, it appears that TSMC has attempted to avoid being subject to patent infringement allegations in the U.S. through creative legal and tax structuring. As set forth below, the Accused Products incorporate, without any license from Globalfoundries, many technologies developed by Globalfoundries and protected by patents owned by Globalfoundries. TSMC's, and/or its customers', importation of infringing articles into the U.S. from Greater China and elsewhere abroad directly harms Globalfoundries and its billions in U.S. investments in manufacturing. Globalfoundries respectfully seeks relief from this Court for Defendant's infringement.

#### **THE ASSERTED PATENT**

12. The '910 patent is entitled "Semiconductor device with transistor local interconnects," and issued on May 31, 2016 to inventors Mahbub Rashed, Irene Y. Lin, Steven Soss, Jeff Kim, Chinh Nguyen, Marc Tarabbia, Scott Johnson, Subramani Kengeri, and Suresh Venkatesan. Globalfoundries owns the entire right, title, and interest in and to the '910 patent. A copy of the '910 patent is attached to this Complaint as Exhibit A.

#### **CLAIMS FOR PATENT INFRINGEMENT**

13. The allegations provided below are exemplary and without prejudice to Globalfoundries' infringement contentions. In providing these allegations, Globalfoundries does not convey or imply any particular claim constructions or the precise scope of the claims. Globalfoundries' claim construction contentions regarding the meaning and scope of the claim terms will be provided under the Court's scheduling order and local rules.

14. As detailed below, each element of at least one claim of the Asserted Patent is literally present in the Accused Products, or is literally practiced by the process through which each of the Accused Products is made. To the extent that any element is not literally present or practiced, each such element is present or practiced under the doctrine of equivalents.

**COUNT I**  
**INFRINGEMENT OF THE '910 PATENT**

15. Globalfoundries incorporates by reference the allegations set forth in paragraphs 1 through 14 as though fully set forth herein.

16. On information and belief, Motorola has directly infringed and continues to infringe one or more claims of the '910 patent, including at least claim 1, literally or under the doctrine of equivalents, by importing into the United States, and/or using, and/or selling, and/or offering to sell in the United States without authority or license, integrated circuits manufactured by TSMC using, for example, TSMC's 7 Nanometer technology and products containing these integrated circuits (collectively, the "'910 Accused Products"), in violation of 35 U.S.C. § 271. The '910 Accused Products include at least the Motorola 5G Moto Mod that incorporates Qualcomm's Snapdragon 855 system on a chip ("SoC") fabricated using, for example, TSMC's 7 Nanometer process.

17. On information and belief, Motorola has directly infringed and continues to infringe one or more claims of the '910 patent, including claim 1, literally or under the doctrine of equivalents, by importing into the United States and/or selling, and/or offering for sale in the United States, without authority or license, '910 Accused Products, in violation of 35 U.S.C. § 271(a). On information and belief, Motorola imports '910 Accused Products into the United States for sales and distribution to customers located in the United States. For example, on information and belief, Motorola imports such products for sales to carrier partners such as

Verizon Wireless, for sales throughout the United States. On information and belief, Motorola offers the '910 Accused Products for sale in the United States. For example, Motorola advertises and offers to sell '910 Accused Products through its website ([www.motorola.com](http://www.motorola.com)) or partner websites.

18. The '910 Accused Products meet all the limitations of at least claim 1 of the '910 patent. Specifically, claim 1 of the '910 patent claims a semiconductor device comprising: a semiconductor substrate; a first transistor and a second transistor disposed on said substrate; each of said transistors comprising a source, a drain, and a gate; a first CB layer electrically connected to said gate of said first transistor; a second CB layer electrically connected to said gate of said second transistor; and a CA layer extending longitudinally between a first end and a second end; wherein said first CB layer is electrically connected to said first end of said CA layer; said second CB layer is electrically connected to said second end of said CA layer; said gate of said first transistor extends longitudinally along a first line and said gate of said second transistor extends longitudinally along a second line, wherein said first and second lines are generally parallel to one another and spaced apart from one another; and said CA layer extends generally parallel to said lines and generally perpendicular to said first CB layer and said second CB layer; and wherein said first CB layer extends longitudinally beyond said gate of said first transistor and/or said second CB layer extends longitudinally beyond said gate of said second transistor.

19. The '910 Accused Products are semiconductor devices. Each is an integrated circuit fabricated using, for example, TSMC's 7 Nanometer semiconductor process.

20. The '910 Accused Products have a semiconductor substrate. Each is an integrated circuit fabricated using, for example, TSMC's 7 Nanometer semiconductor process such that the circuit's structures are fabricated on top of a semiconductor substrate.

21. The '910 Accused Products have a first transistor and a second transistor disposed on said substrate. Each is an integrated circuit fabricated using, for example, TSMC's 7 Nanometer semiconductor process such that at least two transistors are formed on the semiconductor substrate.

22. In the '910 Accused Products, each of the said transistors comprise a source, a drain, and a gate. Each is an integrated circuit fabricated using, for example, TSMC's 7 Nanometer semiconductor process such that at least two transistors are formed on the substrate, where each transistor has a source, a drain, and a gate.

23. The '910 Accused Products have a first CB layer electrically connected to said gate of said first transistor. Each includes, for example, standard cells made up of multiple transistors. The standard cells are fabricated with a local interconnect layer that electrically connects to the gate of a first transistor.

24. The '910 Accused Products have a second CB layer electrically connected to said gate of said second transistor. Each includes, for example, standard cells made up of multiple transistors. The standard cells are fabricated with another local interconnect layer that electrically connects to the gate of a second transistor.

25. The '910 Accused Products have a CA layer extending longitudinally between a first end and a second end; wherein said first CB layer is electrically connected to said first end of said CA layer; said second CB layer is electrically connected to said second end of said CA layer. Each includes, for example, standard cells made up of multiple transistors. The standard cells are fabricated with a layer having a first end and a second end that extends longitudinally such that its ends electrically connect the first and second local interconnect layers.

26. In the '910 Accused Products, the gate of said first transistor extends longitudinally along a first line and said gate of said second transistor extends longitudinally along a second line, wherein said first and second lines are generally parallel to one another and spaced apart from one another. Each includes, for example, standard cells made up of multiple transistors. The standard cells are fabricated such that the first and second transistors include gates that extend longitudinally along lines that are generally parallel to one another and spaced apart.

27. In the '910 Accused Products, the CA layer extends generally parallel to said lines and generally perpendicular to said first CB layer and said second CB layer. Each includes, for example, standard cells made up of multiple transistors. The standard cells are fabricated such that a local interconnect layer is parallel to the lines on which the gates of the first and second transistors lie, and the local interconnect layer is perpendicular to the first and second local interconnect layers described in ¶¶ 23 and 24.

28. In the '910 Accused Products, one or both of the CB layers extends longitudinally beyond the respective gates of the first and second transistors. Each includes, for example, standard cells made up of multiple transistors. The standard cells are fabricated such that the local interconnect layers described in ¶¶ 23 and 24 extend longitudinally beyond the gates of a first and/or second transistor.

29. Globalfoundries has suffered and continues to suffer damages as a result of Defendant's infringement of the '910 patent.

30. Defendant's continuing acts of infringement are a basis of consumer demand for the '910 Accused Products. Defendant's continuing acts of infringement are therefore irreparably harming and causing damage to Globalfoundries, for which Globalfoundries has no

adequate remedy at law, and will continue to suffer such irreparable injury unless Defendant's continuing acts of infringement are enjoined by the Court. The hardships that an injunction would impose are less than those faced by Globalfoundries should an injunction not issue. The public interest would be served by issuance of an injunction.

**JURY DEMAND**

31. Plaintiff demands a jury trial as to all issues that are triable by a jury in this action.

**PRAYER FOR RELIEF**

WHEREFORE, Plaintiff respectfully prays for relief as follows:

- (a) Judgment that Defendant is liable for infringement of one or more claims of the Asserted Patent;
- (b) An Order permanently enjoining Defendant and its respective officers, agents, employees, and those acting in privity or in active concert or participation with it, from further infringement of the Asserted Patent;
- (c) Compensatory damages in an amount according to proof, including lost profits, and in any event no less than a reasonable royalty;
- (d) Pre-judgment interest;
- (e) Post-judgment interest;
- (f) Attorneys' fees based on this being an exceptional case pursuant to 35 U.S.C. § 285, including pre-judgment interest on such fees;
- (g) An accounting and/or supplemental damages for all damages occurring after any discovery cutoff and through final judgment;
- (h) Costs and expenses in this action; and
- (i) Any further relief that the Court deems just and proper.

Dated: August 26, 2019

Respectfully submitted,

FARNAN LLP

/s/ Brian E. Farnan

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